

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch  
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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:** Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-002829**Date Inspected:** 05-Jun-2008**Project Name:** SAS Superstructure**OSM Arrival Time:** 630**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China**CWI Name:** Chen Xi**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** OBG**Summary of Items Observed:**

Caltrans Quality Assurance Inspector (QAI) Bruce Berger arrived on site at the Zhenhua Port Machinery Company (ZPMC) facility at Changxing Island, in Shanghai, China to periodically monitor welding and Quality Control (QC) functions. While on site the QAI observed and/or discovered the following.

**BAY 1**

The Caltrans QAI observed welding utilizing the dual process WPS-B-T-2342-U1 (U-rib)-3 welding procedure specification (WPS) for closed rib welding of the Production Monitoring Test (PMT) #1 for Production Panel DP609-001 on closed U-rib Partial Joint Penetration (PJP) welds in Bay #1. ZPMC welding personnel performed Gantry Machine, Gas Metal Arc Welding (GMAW) for the root pass and immediately performed Gantry Machine, Submerged Arc Welding (SAW) for the cover/final pass on PMT #1, using gantry machine #1. Upon completion of the SAW pass on U-rib PJP welds on PMT #1 Visual Testing (VT) was performed on weld #1 through #4 by ZPMC personnel and was accepted then VT was verified by the Caltrans QAI. Ultrasonic Testing (UT) was then performed by ZPMC inspector and PMT #1 was determined to be acceptable. Macro etch samples were selected by the Caltrans QAI on PMT #1. The 500mm site selected by ZPMC for visual and ultrasonic testing and the area for selection of the Macros was 100mm short of the end of the welds. The "DECK PANEL ACCEPTANCE CRITERIA (May 30, 2008) stated "The last 500mm continuous segment of the panel will be used for specimen testing".

On Deck Panel DP601-001 QA performed magnetic particle testing of the tack welds and found 5 which did not appear satisfactory. ZPMC ground out the tack welds and reweld them. QA witnessed the magnetic particle

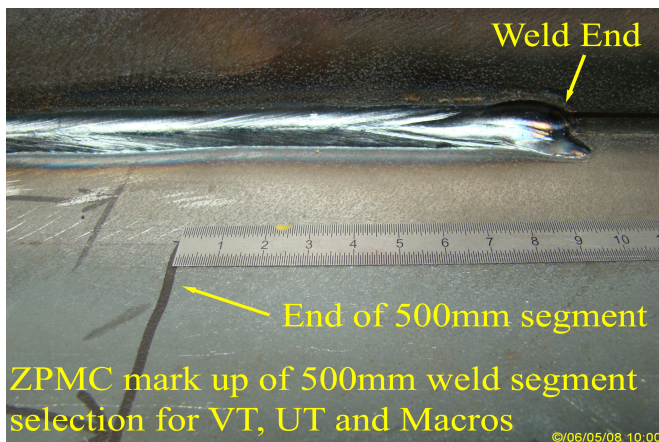
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testing of the replacement tack welds of which ZPMC tested 8. One of the 8 had an indication and a tack weld was subsequently removed and needs to be welded in again.



### Summary of Conversations:

No conversations held today.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Patrick Lowery 858 344-2712, who represents the Office of Structural Materials for your project.

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**Inspected By:** Berger, Bruce

Quality Assurance Inspector

**Reviewed By:** Cochran, Jim

QA Reviewer

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